

ABSTRACT OF THE DISCLOSURE

A storage virtualization environment is provided that includes a system for providing multi-path communications in a virtualization storage environment for managing a virtual volume of data. The system may include a host system connected to first and second communication fabrics and a network switch system connected to the first and second communication fabrics and to third and fourth communication fabrics/ Further, the system includes a set of storage devices storing virtual volume data and connected to the third and fourth storage communication fabrics. In certain embodiments the network switch system includes a first set of storage processors having access to the host system and maintaining virtual volume objects reflecting a logical configuration of the virtual volume. Further, the network switch system includes a second set of storage processors having access to the storage devices and maintaining virtual volume objects associated with logical partitions of the virtual volume data. Also, the first and second set of storage processors are interconnected by a fifth communication fabric and the network switch system provides fault tolerant access by the host system to the virtual volume data using one of a plurality of dynamically configurable multi-communication paths traversing selective combinations of the fabrics, storage processors, and storage devices.